Connecting via Winsock to STN

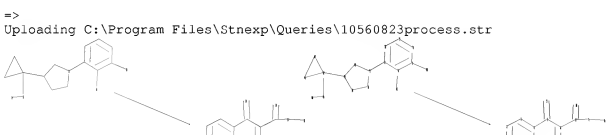
Welcome to STN International! Enter x:x

* * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 10:19:32 ON 22 JAN 2009

=> file casreact

=>
Uploading C:\Program Files\Stnexp\Queries\10560823process.str



chain nodes :
12 13 14 15 16 27 28 29 45 46 47 48
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 17 18 19 20 21 22 23 24 25 26 31 32
33 34 35 36 37 38 39 40 41 42 43 44
chain bonds :
1-11 6-29 7-12 8-13 10-17 13-14 13-15 15-16 22-24 24-27 27-28 31-37
35-48 36-47 40-42 42-45 45-46
ring bonds :
1-2 1-6 2-3 3-4 4-5 4-7 5-6 5-10 7-8 8-9 9-10 11-20 11-23 17-18 17-19
18-19 20-21 21-22 22-23 24-25 24-26 25-26 31-32 31-36 32-33 33-34 34-35
35-36 37-38 37-41 38-39 39-40 40-41 42-43 42-44 43-44
exact/norm bonds :
1-11 4-7 5-10 6-29 7-8 7-12 8-9 9-10 10-17 11-20 11-23 24-27 31-37
36-47 37-38 37-41 38-39 39-40 40-41 42-43 42-44 42-45 43-44
exact bonds :
8-13 15-16 17-18 17-19 18-19 20-21 21-22 22-23 22-24 24-25 24-26 25-26
27-28 35-48 40-42 45-46

```
normalized bonds :
1-2  1-6  2-3  3-4  4-5  5-6  13-14  13-15  31-32  31-36  32-33  33-34  34-35
35-36
isolated ring systems :
containing 1 : 11 : 17 : 24 :


Match level :
1:Atom  2:Atom  3:Atom  4:Atom  5:Atom  6:Atom  7:Atom  8:Atom  9:Atom  10:Atom
11:Atom  12:CLASS  13:CLASS  14:CLASS  15:CLASS  16:CLASS  17:Atom  18:Atom
19:Atom  20:Atom  21:Atom  22:Atom  23:Atom  24:Atom  25:Atom  26:Atom  27:CLASS
28:CLASS  29:CLASS  31:Atom  32:Atom  33:Atom  34:Atom  35:Atom  36:Atom  37:Atom
38:Atom  39:Atom  40:Atom  41:Atom  42:Atom  43:Atom  44:Atom  45:CLASS  46:CLASS
47:CLASS  48:CLASS
fragments assigned product role:
containing 1
fragments assigned reactant/reagent role:
containing 31



L1      STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1              STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.


=> s l1 sam
SAMPLE SEARCH INITIATED 10:20:11 FILE 'CASREACT'
SCREENING COMPLETE -        0 REACTIONS TO VERIFY FROM        0 DOCUMENTS

100.0% DONE       0 VERIFIED       0 HIT RXNS                       0 DOCS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED VERIFICATIONS:         0 TO        0
PROJECTED ANSWERS:               0 TO        0

L2            0 SEA SSS SAM L1 (     0 REACTIONS)

=> s l1 full
FULL SEARCH INITIATED 10:20:15 FILE 'CASREACT'
SCREENING COMPLETE -       13 REACTIONS TO VERIFY FROM        2 DOCUMENTS

100.0% DONE      13 VERIFIED       0 HIT RXNS                       0 DOCS
SEARCH TIME: 00.00.01

L3            0 SEA SSS FUL L1 (     0 REACTIONS)

=> file react
```

```
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                      ENTRY    SESSION
FULL ESTIMATED COST                                  123.13     123.35

FILE 'CASREACT' ENTERED AT 10:20:21 ON 22 JAN 2009
USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT
COPYRIGHT (C) 2009 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'CHEMINFORMRX' ENTERED AT 10:20:21 ON 22 JAN 2009
COPYRIGHT (C) FIZ-CHEMIE BERLIN

FILE 'DJSMONLINE' ENTERED AT 10:20:21 ON 22 JAN 2009
COPYRIGHT (C) 2009 THOMSON REUTERS

FILE 'PS' ENTERED AT 10:20:21 ON 22 JAN 2009
COPYRIGHT (C) 2009 Thieme on STN

=> s l1 full
FULL SEARCH INITIATED 10:20:24 FILE 'CASREACT'
SCREENING COMPLETE -       13 REACTIONS TO VERIFY FROM        2 DOCUMENTS

100.0% DONE      13 VERIFIED       0 HIT RXNS                    0 DOCS
SEARCH TIME: 00.00.01

FULL SEARCH INITIATED 10:20:25 FILE 'CHEMINFORMRX'
SCREENING COMPLETE -        0 REACTIONS TO VERIFY FROM        0 DOCUMENTS

100.0% DONE       0 VERIFIED       0 HIT RXNS                    0 DOCS
SEARCH TIME: 00.00.01

FULL SEARCH INITIATED 10:20:28 FILE 'DJSMONLINE'
SCREENING COMPLETE -        0 REACTIONS TO VERIFY FROM        0 DOCUMENTS

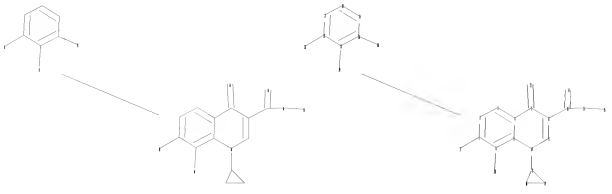
100.0% DONE       0 VERIFIED       0 HIT RXNS                    0 DOCS
SEARCH TIME: 00.00.01

FULL SEARCH INITIATED 10:20:29 FILE 'PS'
SCREENING COMPLETE -        0 REACTIONS TO VERIFY FROM        0 DOCUMENTS

100.0% DONE       0 VERIFIED       0 HIT RXNS                    0 DOCS
SEARCH TIME: 00.00.01

L4           0 L1

=>
Uploading C:\Program Files\Stnexp\Queries\823process2.str
```



chain nodes :
12 13 14 15 16 20 29 30
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 17 18 19 22 23 24 25 26 27 28
chain bonds :
1-11 6-20 7-12 8-13 10-17 13-14 13-15 15-16 22-28 26-30 27-29
ring bonds :
1-2 1-6 2-3 3-4 4-5 4-7 5-6 5-10 7-8 8-9 9-10 17-18 17-19 18-19 22-23
22-27 23-24 24-25 25-26 26-27
exact/norm bonds :
1-11 4-7 5-10 6-20 7-8 7-12 8-9 9-10 10-17 22-28 27-29
exact bonds :
8-13 15-16 17-18 17-19 18-19 26-30
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6 13-14 13-15 22-23 22-27 23-24 24-25 25-26
26-27
isolated ring systems :
containing 1 : 11 : 17 : 22 :

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:Atom 18:Atom
19:Atom 20:CLASS 22:Atom 23:Atom 24:Atom 25:Atom 26:Atom 27:Atom 28:Atom
29:CLASS 30:CLASS

L5 STRUCTURE UPLOADED

=> d 15
L5 HAS NO ANSWERS
L5 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

=> s l5 full
FULL SEARCH INITIATED 10:22:27 FILE 'CASREACT'
SCREENING COMPLETE - 2009 REACTIONS TO VERIFY FROM 94 DOCUMENTS

100.0% DONE 2009 VERIFIED 0 HIT RXNS 0 DOCS
SEARCH TIME: 00.00.01

FULL SEARCH INITIATED 10:22:28 FILE 'CHEMINFORMRX'
SCREENING COMPLETE - 32 REACTIONS TO VERIFY FROM 6 DOCUMENTS

100.0% DONE 32 VERIFIED 0 HIT RXNS 0 DOCS
SEARCH TIME: 00.00.03

FULL SEARCH INITIATED 10:22:32 FILE 'DJSMONLINE'
SCREENING COMPLETE - 0 REACTIONS TO VERIFY FROM 0 DOCUMENTS

100.0% DONE 0 VERIFIED 0 HIT RXNS 0 DOCS
SEARCH TIME: 00.00.01

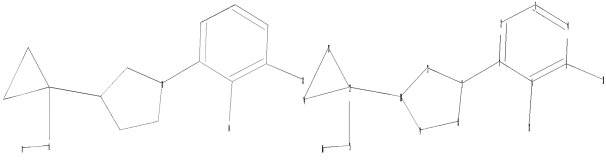
FULL SEARCH INITIATED 10:22:33 FILE 'PS'
SCREENING COMPLETE - 4 REACTIONS TO VERIFY FROM 2 DOCUMENTS

100.0% DONE 4 VERIFIED 0 HIT RXNS 0 DOCS
SEARCH TIME: 00.00.01

L6 0 L5

=> file reg

Uploading C:\Program Files\Stnexp\Queries\823cmpd2.str



chain nodes :
15 16 17 18

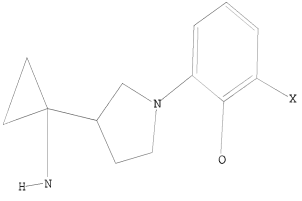
```
ring nodes :
1  2  3  4  5  6  7  8  9  10  11  12  13  14
chain bonds :
1-7  5-18  6-17  10-12  12-15  15-16
ring bonds :
1-2  1-6  2-3  3-4  4-5  5-6  7-8  7-11  8-9  9-10  10-11  12-13  12-14  13-14
exact/norm bonds :
1-7  6-17  7-8  7-11  8-9  9-10  10-11  12-13  12-14  12-15  13-14
exact bonds :
5-18  10-12  15-16
normalized bonds :
1-2  1-6  2-3  3-4  4-5  5-6

Match level :
1:Atom  2:Atom  3:Atom  4:Atom  5:Atom  6:Atom  7:Atom  8:Atom  9:Atom  10:Atom
11:Atom  12:Atom  13:Atom  14:Atom  15:CLASS  16:CLASS  17:CLASS  18:CLASS



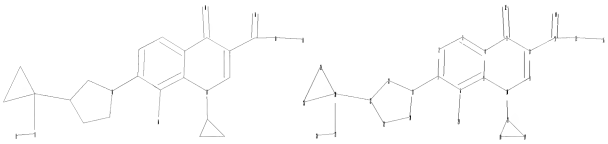
L7      STRUCTURE UPLOADED

=> d l7
L7 HAS NO ANSWERS
L7              STR
```




```
Structure attributes must be viewed using STN Express query preparation.

=>
Uploading C:\Program Files\Stnexp\Queries\10560823compound.str
```



```
chain nodes :
12  13  14  15  16  27  28  29
ring nodes :
1  2  3  4  5  6  7  8  9  10  11  17  18  19  20  21  22  23  24  25  26
chain bonds :
1-11  6-29  7-12  8-13  10-17  13-14  13-15  15-16  22-24  24-27  27-28
ring bonds :
1-2  1-6  2-3  3-4  4-5  4-7  5-6  5-10  7-8  8-9  9-10  11-20  11-23  17-18  17-19
 18-19  20-21  21-22  22-23  24-25  24-26  25-26
exact/norm bonds :
1-11  4-7  5-10  6-29  7-8  7-12  8-9  9-10  10-17  11-20  11-23  24-27
exact bonds :
8-13  15-16  17-18  17-19  18-19  20-21  21-22  22-23  22-24  24-25  24-26  25-26
27-28
normalized bonds :
1-2  1-6  2-3  3-4  4-5  5-6  13-14  13-15
isolated ring systems :
containing 1 : 11 : 17 : 24 :


Match level :
1:Atom  2:Atom  3:Atom  4:Atom  5:Atom  6:Atom  7:Atom  8:Atom  9:Atom  10:Atom
11:Atom  12:CLASS  13:CLASS  14:CLASS  15:CLASS  16:CLASS  17:Atom  18:Atom
19:Atom  20:Atom  21:Atom  22:Atom  23:Atom  24:Atom  25:Atom  26:Atom  27:CLASS
28:CLASS  29:CLASS



L8      STRUCTURE UPLOADED

=> s l7 full
L9             5 SEA SSS FUL L7

=> s l8 full

L10           19 SEA SSS FUL L8

=> file ca
```

```
=> d his

     (FILE 'HOME' ENTERED AT 10:19:32 ON 22 JAN 2009)

     FILE 'CASREACT' ENTERED AT 10:19:43 ON 22 JAN 2009
L1             STRUCTURE UPLOADED
L2           0 S L1 SAM
L3           0 S L1 FULL

     FILE 'CASREACT, CHEMINFORMRX, DJSMONLINE, PS' ENTERED AT 10:20:21 ON 22
     JAN 2009
L4           0 S L1
L5             STRUCTURE UPLOADED
L6           0 S L5

     FILE 'REGISTRY' ENTERED AT 10:24:33 ON 22 JAN 2009
L7             STRUCTURE UPLOADED
L8             STRUCTURE UPLOADED
L9           5 S L7 FULL
L10         19 S L8 FULL

     FILE 'CA' ENTERED AT 10:25:29 ON 22 JAN 2009

=> s l9 full
L11          1 L9

=> s l10 full
L12         40 L10

=> s l11 and l12
L13          1 L11 AND L12

=> d ibib abs

L13  ANSWER 1 OF 1  CA  COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER:        142:93693  CA
TITLE:                   Process for preparation of quinolinone derivatives
INVENTOR(S):             Muto, Makoto; Kitagawa, Yutaka
PATENT ASSIGNEE(S):      Daiichi Pharmaceutical Co., Ltd., Japan
SOURCE:                  PCT Int. Appl., 23 pp.
                         CODEN: PIXXD2
DOCUMENT TYPE:           Patent
LANGUAGE:                Japanese
FAMILY ACC. NUM. COUNT:  1
PATENT INFORMATION:

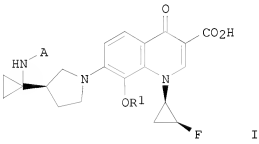
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     --------------      ----   --------    -------------------    --------
     WO 2004113321        A1    20041229    WO 2004-JP8607         20040618
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
             NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
             TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
```

AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
SN, TD, TG

EP 1634879 A1 20060315 EP 2004-746109 20040618
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK

US 20060122396 A1 20060608 US 2005-560823 20051215
PRIORITY APPLN. INFO.: JP 2003-175212 A 20030619
WO 2004-JP8607 W 20040618

OTHER SOURCE(S): MARPAT 142:93693
GI



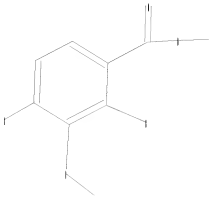

I

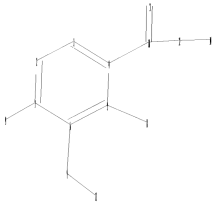
AB This invention pertains to a method for position-selectively introducing an amino group into a difluorobenzoic acid compound; a novel process for producing quinolinone derivs. I [wherein A = a protecting group; R1 = alkyl]. For example, the compound I [where A = tert-BuO2C; R1 = Me] was prepared in a multi-step synthesis starting from 2,4-difluoro-3-methoxybenzoic acid and (3R)-3-[1-(tert-butoxycarbonylamino)cyclopropyl]pyrrolidine. This invention provides a convenient method for regioselective amination of difluorobenzoic acid compound

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> file reg

=>
Uploading C:\Program Files\Stnexp\Queries\phen.str





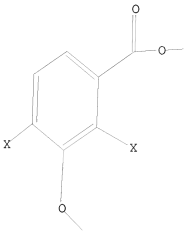
```
chain nodes :
7  8  9  10  11  12  13  14
ring nodes :
1  2  3  4  5  6
chain bonds :
1-9  4-10  5-8  6-7  7-13  10-11  10-12  12-14
ring bonds :
1-2  1-6  2-3  3-4  4-5  5-6
exact/norm bonds :
6-7  7-13  10-11  10-12  12-14
exact bonds :
1-9  4-10  5-8
normalized bonds :
1-2  1-6  2-3  3-4  4-5  5-6


Match level :
1:Atom  2:Atom  3:Atom  4:Atom  5:Atom  6:Atom  7:CLASS  8:CLASS  9:CLASS  10:CLASS
 11:CLASS  12:CLASS  13:CLASS  14:CLASS



L14     STRUCTURE UPLOADED

=> d l14
L14 HAS NO ANSWERS
L14             STR
```




Structure attributes must be viewed using STN Express query preparation.

```
=> s l14 full

L15         148 SEA SSS FUL L14

=> file ca

=> s l15
L16          88 L15

=> d his

     (FILE 'HOME' ENTERED AT 10:19:32 ON 22 JAN 2009)

     FILE 'CASREACT' ENTERED AT 10:19:43 ON 22 JAN 2009
L1               STRUCTURE UPLOADED
L2             0 S L1 SAM
L3             0 S L1 FULL

     FILE 'CASREACT, CHEMINFORMRX, DJSMONLINE, PS' ENTERED AT 10:20:21 ON 22
     JAN 2009
L4             0 S L1
L5               STRUCTURE UPLOADED
L6             0 S L5

     FILE 'REGISTRY' ENTERED AT 10:24:33 ON 22 JAN 2009
L7               STRUCTURE UPLOADED
L8               STRUCTURE UPLOADED
L9             5 S L7 FULL
L10           19 S L8 FULL

     FILE 'CA' ENTERED AT 10:25:29 ON 22 JAN 2009
L11            1 S L9 FULL
L12           40 S L10 FULL
L13            1 S L11 AND L12
```

```
     FILE 'REGISTRY' ENTERED AT 10:26:08 ON 22 JAN 2009
L14              STRUCTURE UPLOADED
L15         148 S L14 FULL

     FILE 'CA' ENTERED AT 10:27:47 ON 22 JAN 2009
L16          88 S L15

=> s l16 and l12
L17           1 L16 AND L12

=> s l10/prep
            40 L10
       4701185 PREP/RL
L18         10 L10/PREP
                (L10 (L) PREP/RL)

=> d  1-10 ibib abs fhitstr

L18  ANSWER 1 OF 10  CA  COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER:         149:493695  CA
TITLE:                    Method for producing quinolonecarboxylic acid
                          derivatives
INVENTOR(S):              Sato, Koji; Sakuratani, Kenji
PATENT ASSIGNEE(S):       Daiichi Sankyo Company, Limited, Japan
SOURCE:                   PCT Int. Appl., 32pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 Japanese
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     --------------      ----   --------    -------------------    --------
     WO 2008126384        A1    20081023    WO 2008-JP817          20080331
         W:  AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ,
             CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES,
             FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE,
             KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD,
             ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH,
             PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM,
             TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU,
             IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK,
             TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,
             TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW,
             AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
PRIORITY APPLN. INFO.:                        JP 2007-90650       A  20070330
OTHER SOURCE(S):          CASREACT 149:493695; MARPAT 149:493695
GI
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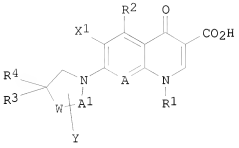


I

AB The title compds. I [A1 = (CH2)n; R1 = (un)substituted alkyl, (un)substituted cycloalkyl, (un)substituted Ph, etc.; R2 = (un)substituted amino, H, alkyl, etc.; X1 = H, halo; A = N, CX2; X2 = H, cyano, halo, etc.; X2 and R1 and a part of the main nucleus may be united to form an (un)substituted ring; W = CHR5, O, NR6; R5 = H, halo, (un)substituted alkyl, etc.; R6 = H, alkyl, cycloalkyl; Y = H, alkyl, amino (connected to an optional C atom on the saturated hetero ring), etc.; n = 0 - 2; R3, R4 = H, halo, (amino-substituted) cycloalkyl, etc.; further details related to R3 and R4 are given] are prepared by reaction of a haloquinolonecarboxylic acid derivative with a cyclic amine salt and a boron derivative in a solvent in the presence of a base. I are antibacterials (no data). Thus, 1-cyclopropyl-1,4-dihydro-6-fluoro-8-methoxy-7-(3-methyl-1-piperazinyl)-4-oxo-3-quinolinecarboxylic acid was prepared by reaction of 1-cyclopropyl-6,7-difluoro-1,4-dihydro-8-methoxy-4-oxo-3-quinolinecarboxylic acid with 2-methylpiperazine dihydrochloride in acetonitrile containing triethylamine and BF3-THF complex.

IT 817194-48-2P
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(preparation of quinolonecarboxylic acid by reaction of haloquinolonecarboxylic acid with cyclic amine salt and boron compound in solvent in presence of base.)

RN 817194-48-2 CA

CN 3-Quinolinecarboxylic acid, 7-[(3R)-3-[1-[[(1,1-dimethylethoxy)carbonyl]amino]cyclopropyl]-1-pyrrolidinyl]-1-[(1R,2S)-2-fluorocyclopropyl]-1,4-dihydro-8-methoxy-4-oxo- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 2 OF 10 CA COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 146:387110 CA
TITLE: Method for production of quinolone-containing lyophilized preparation
INVENTOR(S): Nishimoto, Norihiro
PATENT ASSIGNEE(S): Daiichi Pharmaceutical Co., Ltd., Japan
SOURCE: PCT Int. Appl., 61pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2007037330 | A1 | 20070405 | WO 2006-JP319307 | 20060928 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW | | | | |
| RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| EP 1930006 | A1 | 20080611 | EP 2006-810754 | 20060928 |
| R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, RS | | | | |
| US 20080300403 | A1 | 20081204 | US 2008-67826 | 20080324 |
| PRIORITY APPLN. INFO.: | | | JP 2005-282393 A | 20050928 |
| | | | WO 2006-JP319307 W | 20060928 |

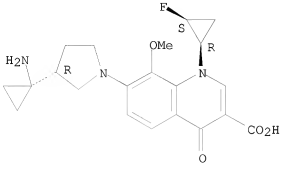
OTHER SOURCE(S): MARPAT 146:387110

AB Disclosed is a lyophilized preparation which contains only a quinolone-type synthetic anti-bacterial compound and a pH adjusting agent and has an excellent re-solubilizing property. Also disclosed is a method for production of a lyophilized preparation comprising a quinolone-type synthetic anti-bacterial compound as an active ingredient. The method comprises the steps of cooling an aqueous solution containing a quinolone-type synthetic anti-bacterial compound and a pH adjusting agent to yield a frozen material, increasing the temperature temporarily, and re-cooling the material to lyophilize the material.

IT 431058-65-0P
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(manufacture of lyophilized prepns. containing quinolone-type antibacterials)
RN 431058-65-0 CA
CN 3-Quinolinecarboxylic acid, 7-[(3R)-3-(1-aminocyclopropyl)-1-pyrrolidinyl]-

1-[(1R,2S)-2-fluorocyclopropyl]-1,4-dihydro-8-methoxy-4-oxo- (CA INDEX NAME)

Absolute stereochemistry.




REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 3 OF 10 CA COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 143:172685 CA
TITLE: Preparation of rifamycin iminomethylenyl quinolone derivatives effective against drug-resistant microbes
INVENTOR(S): Ding, Charles Z.; Jin, Yafei; Longgood, Jamie C.; Ma, Zhenkun; Li, Jing; Kim, In Ho; Minor, Keith P.; Harran, Susan
PATENT ASSIGNEE(S): Cumbre Inc., USA
SOURCE: PCT Int. Appl., 117 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2005070941 | A1 | 20050804 | WO 2005-US838 | 20050112 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| US 20050209210 | A1 | 20050922 | US 2005-34279 | 20050112 |
| US 7238694 | B2 | 20070703 | | |
| EP 1723150 | A1 | 20061122 | EP 2005-705477 | 20050112 |
| R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR | | | | |
| PRIORITY APPLN. INFO.: | | | US 2004-536018P | P 20040113 |

WO 2005-US838 W 20050112

OTHER SOURCE(S): CASREACT 143:172685; MARPAT 143:172685

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Rifamycin 3-iminomethylenyl (-CH=N-) derivs. of formula I [A = quinolone group; X = alkylene, arylene, heterocyclylene, CO, C=N, O, etc.; R = H, acetyl, etc.] are prepared which have antimicrobial activities, including activities against drug-resistant microorganisms. The claimed rifamycin derivative has a rifamycin moiety covalently linked to a linker through an iminomethylenyl (-CH = N-) group at the C-3 carbon of the rifamycin moiety and the linker is, in turn, covalently linked to a quinolone structure or its pharmacophore within the DNA gyrase and topoisomerase IV inhibitor family. The inventive rifamycins are novel and exhibit activity against both rifampin and ciprofloxacin-resistant microorganisms. Thus, II was prepared from ciprofloxacin and 3-formylrifamycin SV. The prepared compds. have MIC values of 0.06-16 mcg/mL against Staphylococcus aureus ATCC 29213 RpoBH418Y.

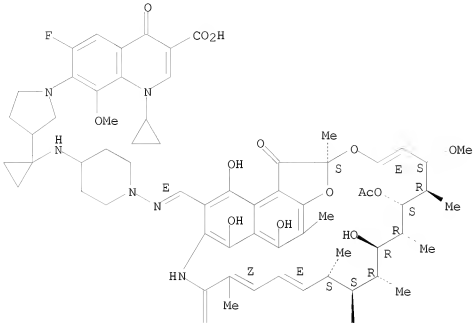
IT 861391-37-9P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of rifamycin iminomethylene quinolone derivs. as antimicrobial agents)

RN 861391-37-9 CA

CN Rifamycin, 3-[(E)-[[4-[[1-[1-(3-carboxy-1-cyclopropyl-6-fluoro-1,4-dihydro-8-methoxy-4-oxo-7-quinolinyl)-3-pyrrolidinyl]cyclopropyl]amino]-1-piperidinyl]imino]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as described by E or Z.

PAGE 1-A



PAGE 2-A

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

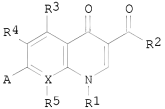
L18 ANSWER 4 OF 10 CA COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 143:26640 CA
TITLE: Preparation of quinolone antibacterial agents
INVENTOR(S): Ellsworth, Edmund Lee; Taylor, Clarke Bentley; Murphy, Sean Timothy; Rauckhorst, Mark Ryan; Starr, Jeremy Tyson; Hutchings, Kim Marie; Limberakis, Chris; Hoyer, Denton Wade
PATENT ASSIGNEE(S): Warner-Lambert Company LLC, USA
SOURCE: PCT Int. Appl., 208 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2005049602 | A1 | 20050602 | WO 2004-IB3666 | 20041105 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, | | | | |

CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO,
SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
NE, SN, TD, TG

NL 1027545 C2 20060117 NL 2004-1027545 20041118
PRIORITY APPLN. INFO.: US 2003-523071P P 20031118
US 2004-605496P P 20040831

OTHER SOURCE(S): MARPAT 143:26640
GI



I

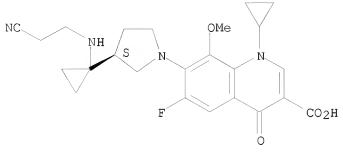
AB Compds. of formula I, e.g., 7-[3-(2-Cyanoethylamino)pyrrolidin-1-yl]-1-cyclopropyl-6-fluoro-8-methoxy-4-oxo-1,4-dihydroquinoline-3-carboxylic acid, can be used in a variety of applications including use as antibacterial agents. The compds., method of treatment using the compds., and formulations containing the compds. are claimed. Methods of preparation of the compds. are exemplified. The compds. of the invention were tested against a variety of gram-neg. and gram-pos. organisms.

IT 852857-63-7P
RL: PAC (Pharmacological activity); RCT (Reactant); PREP (Preparation); THU (Therapeutic use); PREP (Preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(drug candidate; preparation of quinolone antibacterial agents)

RN 852857-63-7 CA

CN 3-Quinolinecarboxylic acid, 7-[(3S)-3-[1-[(2-cyanoethyl)amino]cyclopropyl]-1-pyrrolidinyl]-1-cyclopropyl-6-fluoro-1,4-dihydro-8-methoxy-4-oxo- (CA INDEX NAME)

Absolute stereochemistry.

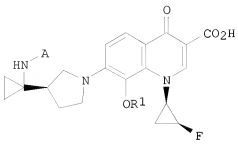



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 5 OF 10 CA COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 142:93693 CA
TITLE: Process for preparation of quinolinone derivatives
INVENTOR(S): Muto, Makoto; Kitagawa, Yutaka
PATENT ASSIGNEE(S): Daiichi Pharmaceutical Co., Ltd., Japan
SOURCE: PCT Int. Appl., 23 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2004113321 | A1 | 20041229 | WO 2004-JP8607 | 20040618 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| EP 1634879 | A1 | 20060315 | EP 2004-746109 | 20040618 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK | | | | |
| US 20060122396 | A1 | 20060608 | US 2005-560823 | 20051215 |
| PRIORITY APPLN. INFO.: | | | JP 2003-175212 A | 20030619 |
| | | | WO 2004-JP8607 W | 20040618 |

OTHER SOURCE(S): MARPAT 142:93693
GI



I

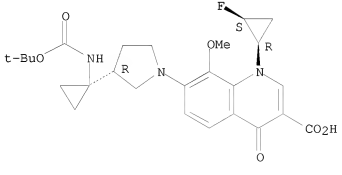
AB This invention pertains to a method for position-selectively introducing an amino group into a difluorobenzoic acid compound; a novel process for producing quinolinone derivs. I [wherein A = a protecting group; R1 = alkyl]. For example, the compound I [where A = tert-BuO2C; R1 = Me] was prepared in a multi-step synthesis starting from 2,4-difluoro-3-methoxybenzoic acid and (3R)-3-[1-(tert-butoxycarbonylamino)cyclopropyl]pyrrolidine. This invention provides a convenient method for regioselective amination of difluorobenzoic acid compound

IT 817194-48-2P
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(preparation of quinolinone derivs. via regioselective amination)

RN 817194-48-2 CA

CN 3-Quinolinecarboxylic acid, 7-[(3R)-3-[1-[[(1,1-dimethylethoxy)carbonyl]amino]cyclopropyl]-1-pyrrolidinyl]-1-[(1R,2S)-2-fluorocyclopropyl]-1,4-dihydro-8-methoxy-4-oxo- (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

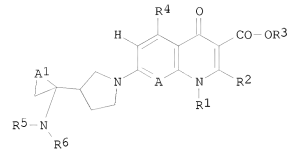
L18 ANSWER 6 OF 10 CA COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 136:401768 CA
TITLE: Preparation of dehalogenoquinolinecarboxylic acid derivatives, naphthyridine derivatives, and benzoxazine derivatives as antibacterial agents
INVENTOR(S): Takahashi, Hisashi; Miyauchi, Rie; Itoh, Masao;

Takemura, Makoto; Hayakawa, Isao
PATENT ASSIGNEE(S): Daiichi Pharmaceutical Co., Ltd., Japan
SOURCE: PCT Int. Appl., 122 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2002040478 | A1 | 20020523 | WO 2001-JP10086 | 20011119 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| CA 2429440 | A1 | 20020523 | CA 2001-2429440 | 20011119 |
| AU 2002024050 | A | 20020527 | AU 2002-24050 | 20011119 |
| EP 1336611 | A1 | 20030820 | EP 2001-996540 | 20011119 |
| EP 1336611 | B1 | 20070905 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| BR 2001015326 | A | 20040225 | BR 2001-15326 | 20011119 |
| JP 3711108 | B2 | 20051026 | JP 2002-543488 | 20011119 |
| CN 1269817 | C | 20060816 | CN 2001-822074 | 20011119 |
| RU 2298006 | C2 | 20070427 | RU 2003-114743 | 20011119 |
| AT 372338 | T | 20070915 | AT 2001-996540 | 20011119 |
| ES 2292642 | T3 | 20080316 | ES 2001-996540 | 20011119 |
| IN 2003CN00734 | A | 20050415 | IN 2003-CN734 | 20030514 |
| NO 2003002255 | A | 20030721 | NO 2003-2255 | 20030519 |
| NO 326157 | B1 | 20081013 | | |
| US 20040063754 | A1 | 20040401 | US 2003-432043 | 20030519 |
| ZA 2003003871 | A | 20040819 | ZA 2003-3871 | 20030519 |
| MX 2003PA04437 | A | 20040504 | MX 2003-PA4437 | 20030520 |
| KR 777149 | B1 | 20071119 | KR 2003-706835 | 20030520 |
| HK 1056729 | A1 | 20080206 | HK 2003-109128 | 20031215 |
| JP 2004269544 | A | 20040930 | JP 2004-156517 | 20040526 |
| JP 2005194274 | A | 20050721 | JP 2004-379455 | 20041228 |
| JP 3760172 | B2 | 20060329 | | |
| US 20070123560 | A1 | 20070531 | US 2006-644901 | 20061226 |

| PRIORITY APPLN. INFO.: | | | |
|---|---|---|---|
| JP 2000-352269 | A | 20001120 | |
| JP 2001-248822 | A | 20010820 | |
| JP 2002-543488 | A3 | 20011119 | |
| WO 2001-JP10086 | W | 20011119 | |
| US 2003-432043 | A1 | 20030519 | |

OTHER SOURCE(S): MARPAT 136:401768
GI



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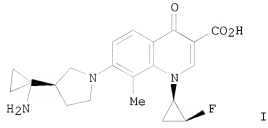


II

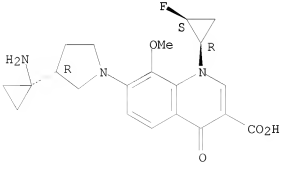
AB The title compds. I [R1 = alkyl, etc.; R2 = alkylthio, H; further detail on R1 and R2 is given; R3 = H, Ph, etc.; R4 = alkyl, etc.; A = N, etc.; R5, R6 = alkyl, etc.; A1 = (CH2)n; n = 1 or 2] are prepared I exhibit broad and potent activity against gram-neg. and gram-pos. bacteria and against resistant bacteria. The title compound II in vitro showed MIC of 0.025 μg/mL against P. aeruginosa 32121. Formulations are given.

IT 431058-65-0P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of dehalogenoquinolinecarboxylic acid derivs., naphthyridine derivs., and benzoxazine derivs. as antibacterial agents)

RN 431058-65-0 CA

CN 3-Quinolinecarboxylic acid, 7-[(3R)-3-(1-aminocyclopropyl)-1-pyrrolidinyl]-1-[(1R,2S)-2-fluorocyclopropyl]-1,4-dihydro-8-methoxy-4-oxo- (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 7 OF 10 CA COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 133:237871 CA
TITLE: Preparation of cis-substituted aminocycloalkylpyrrolidine derivatives of 1,4-dihydro-4-oxoquinoline-3-carboxylic acids as antimicrobial drugs
INVENTOR(S): Takemura, Makoto; Kimura, Youichi; Takahashi, Hisashi; Kimura, Kenichi; Miyauchi, Satoru; Ohki, Hitoshi; Sugita, Kazuyuki; Miyauchi, Rie
PATENT ASSIGNEE(S): Daiichi Pharmaceutical Co., Ltd., Japan
SOURCE: U.S., 67 pp., Cont.-in-part of Appl. No. PCT/JP96/03440.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 6121285 | A | 20000919 | US 1998-82155 | 19980521 |
| WO 9719072 | A1 | 19970529 | WO 1996-JP3440 | 19961122 |
| W: AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GE, HU, IL, IS, JP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, TR, TT, UA, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| ZA 9804273 | A | 19981125 | ZA 1998-4273 | 19980520 |
| US 6184388 | B1 | 20010206 | US 1999-397515 | 19990917 |

PRIORITY APPLN. INFO.:

| | | |
|---|---|---|
| JP 1995-304129 | A | 19951122 |
| JP 1996-192637 | A | 19960723 |
| WO 1996-JP3440 | A2 | 19961122 |
| JP 1997-131413 | A | 19970521 |
| JP 1997-140643 | A | 19970529 |
| US 1998-82155 | A1 | 19980521 |

OTHER SOURCE(S): MARPAT 133:237871
GI

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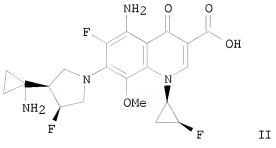


II

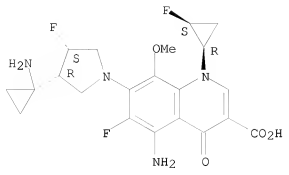
AB The title compds. (I) [wherein R1, R6, and R7 = independently H or alkyl; R2 = H or (un)substituted alkyl; R3 = H, OH, halo, carbamoyl, alkyl, alkoxy, or alkylthio; one of R4 and R5 = H and the other is CH2OH, Me, OMe, or F; or R4 and R5 together = hydroxyimino, a polymethylene chain of 3-6 C's which form a spirocyclic structure together with the pyrrolidine ring or an alkoxyimino group; n = 1-3; R8 = (halo)alkyl, alkenyl, alkoxy, alkylamino, (un)substituted cycloalkyl or (hetero)aryl, etc.; R9 = H or alkylthio; X1 = H or halo; R10 = H, NH2, OH, SH, halomethyl, alkyl, alkenyl, or alkoxy; A1 = N or (un)substituted C; Y1 = H, Ph, acetoxymethyl, pivaloyloxymethyl, ethoxycarbonyl, etc.] were prepared I have excellent antimicrobial activity and are highly safe. Thus, 1-benzyloxycarbonyl-4-(R)-(1-tert-butoxycarbonylaminocyclopropyl)-3-(S)-fluoropyrrolidine was dissolved in EtOH and hydrogenated using Pd/C. A solution of the residue and DMSO was mixed with TEA and 5-amino-6,7-difluoro-1-[2-(S)-fluoro-1-(R)-cyclopropyl]-1,4-dihydro-8-methoxy-4-oxoquinoline-3-carboxylic acid to give II (43%). II was tested on 13 microbial strains and showed potent inhibition with MIC values ranging from ≤ 0.003 μg/mL to 0.39 μg/mL. In an acute toxicity test on male mice, none of the five mice died upon administration of 150 mg/kg doses of II.

IT 190954-09-7P
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of 6-(aminocycloalkylpyrrolidinyl)-1,4-dihydro-4-oxoquinolines as antimicrobial agents by addition of 6-fluoro-1,4-dihydro-4-oxoquinolines to aminocycloalkylpyrrolidines)

RN 190954-09-7 CA

CN 3-Quinolinecarboxylic acid, 5-amino-7-[(3R,4S)-3-(1-aminocyclopropyl)-4-fluoro-1-pyrrolidinyl]-6-fluoro-1-[(1R,2S)-2-fluorocyclopropyl]-1,4-dihydro-8-methoxy-4-oxo- (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

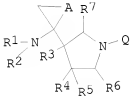
L18 ANSWER 8 OF 10 CA COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 130:13992 CA
TITLE: Preparation and formulation of cis-disubstituted aminocycloalkylpyrrolidine moiety-containing quinoline and benzoxazine derivatives as bactericides
INVENTOR(S): Takemura, Makoto; Takahashi, Hisashi; Sugita, Kazuyuki; Ohki, Hitoshi; Miyauchi, Satoru; Miyauchi, Rie
PATENT ASSIGNEE(S): Daiichi Pharmaceutical Co., Ltd., Japan
SOURCE: PCT Int. Appl., 83 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 9852939 | A1 | 19981126 | WO 1998-JP2219 | 19980520 |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW | | | | |
| RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| ZA 9804273 | A | 19981125 | ZA 1998-4273 | 19980520 |
| CA 2289605 | A1 | 19981126 | CA 1998-2289605 | 19980520 |
| AU 9874493 | A | 19981211 | AU 1998-74493 | 19980520 |
| EP 1020459 | A1 | 20000719 | EP 1998-921738 | 19980520 |
| EP 1020459 | B1 | 20050406 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| BR 9810235 | A | 20010918 | BR 1998-10235 | 19980520 |
| IN 1998MA01076 | A | 20050304 | IN 1998-MA1076 | 19980520 |
| AT 292632 | T | 20050415 | AT 1998-921738 | 19980520 |
| NO 9905653 | A | 20000121 | NO 1999-5653 | 19991118 |
| MX 9910715 | A | 20000831 | MX 1999-10715 | 19991119 |

US 20020077345 A1 20020620 US 2001-985256 20011102
PRIORITY APPLN. INFO.: JP 1997-131413 A 19970521
JP 1997-140643 A 19970529
WO 1998-JP2219 W 19980520
US 1999-424112 A1 19991119

OTHER SOURCE(S): MARPAT 130:13992

GI



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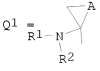
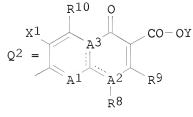




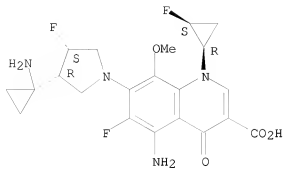
AB The title compds. I [R1 represents hydrogen or alkyl; R2 represents hydrogen or alkyl; R3 and R5 represent each hydrogen; R4 represents hydroxy, halogeno, carbamoyl, alkyl, alkoxy or alkylthio; R6 and R7 represent each hydrogen or alkyl; A = (CH2)n; n is an integer of from 1 to 3; R4 and the substituent on the pyrrolidine ring of general formula Q1 are arranged at the cis-configuration; and Q is a partial structure represented by Q2; R8 = alkyl, etc.; R9 = H, etc.; further details on R9 and R8 are given; R10 = amino, etc.; X1 = halo, H; A1 = N, etc.; A2, A3 = N, C; further details on A2 and A3 are given; Y = H, etc.] are prepared Three compds. of this invention in vitro showed MIC values of 0.10 to 0.39 μg/mL against P. aeruginosa 32104.

IT 190954-09-7P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of cis-disubstituted aminocycloalkylpyrrolidine moiety-containing
quinoline and benzoxazine derivs. as bactericides)

RN 190954-09-7 CA

CN 3-Quinolinecarboxylic acid, 5-amino-7-[(3R,4S)-3-(1-aminocyclopropyl)-4-fluoro-1-pyrrolidinyl]-6-fluoro-1-[(1R,2S)-2-fluorocyclopropyl]-1,4-dihydro-8-methoxy-4-oxo- (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 9 OF 10 CA COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 127:50550 CA
ORIGINAL REFERENCE NO.: 127:9645a,9648a
TITLE: Preparation and formulation of substituted aminocycloalkylpyrrolidinylquinolines as medical bactericides
INVENTOR(S): Takemura, Makoto; Kimura, Youichi; Takahashi, Hisashi; Kimura, Kenichi; Miyauchi, Satoru; Ohki, Hitoshi
PATENT ASSIGNEE(S): Daiichi Pharmaceutical Co., Ltd., Japan
SOURCE: PCT Int. Appl., 104 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 9719072 | A1 | 19970529 | WO 1996-JP3440 | 19961122 |
| W: AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GE, HU, IL, IS, JP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, TR, TT, UA, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| CA 2238765 | A1 | 19970529 | CA 1996-2238765 | 19961122 |
| AU 9675898 | A | 19970611 | AU 1996-75898 | 19961122 |
| AU 707889 | B2 | 19990722 | | |
| CN 1207738 | A | 19990210 | CN 1996-199713 | 19961122 |
| CN 1119343 | C | 20030827 | | |
| EP 911328 | A1 | 19990428 | EP 1996-938533 | 19961122 |
| EP 911328 | B1 | 20060208 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| NZ 322202 | A | 20000526 | NZ 1996-322202 | 19961122 |
| TW 402601 | B | 20000821 | TW 1996-85114493 | 19961122 |
| AT 317393 | T | 20060215 | AT 1996-938533 | 19961122 |
| PT 911328 | T | 20060531 | PT 1996-938533 | 19961122 |
| ES 2258780 | T3 | 20060901 | ES 1996-938533 | 19961122 |

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|---|---|---|---|---|---|
| JP 4040091 | B2 | 20080130 | JP 1997-519602 | | 19961122 |
| NO 9802297 | A | 19980722 | NO 1998-2297 | | 19980520 |
| US 6121285 | A | 20000919 | US 1998-82155 | | 19980521 |
| US 6184388 | B1 | 20010206 | US 1999-397515 | | 19990917 |
| PRIORITY APPLN. INFO.: | | | JP 1995-304129 | A | 19951122 |
| | | | JP 1996-192637 | A | 19960723 |
| | | | WO 1996-JP3440 | W | 19961122 |
| | | | JP 1997-131413 | A | 19970521 |
| | | | JP 1997-140643 | A | 19970529 |
| | | | US 1998-82155 | A1 | 19980521 |

OTHER SOURCE(S): MARPAT 127:50550

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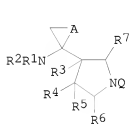


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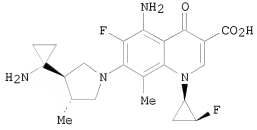



II

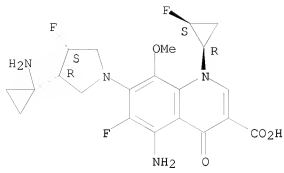
AB The title compds. I [R1 = H, alkyl; R2 = H, (un)substituted alkyl; R3 = H, halo, etc.; R4, R5 = H, OH, etc.; further details on R4, R5 are given; R6, R7 = H, alkyl; A = (CH2)n; n = 1 - 3; Q = quinoline moiety or analog (generic structures given)] are prepared The title compound II (preparation given)
in vitro showed MIC of 0.1 μg/mL against Pseudomonas aeruginosa 32121.

IT 190954-09-7P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of substituted aminocycloalkylpyrrolidinylquinolines as medical bactericides)

RN 190954-09-7 CA

CN 3-Quinolinecarboxylic acid, 5-amino-7-[(3R,4S)-3-(1-aminocyclopropyl)-4-fluoro-1-pyrrolidinyl]-6-fluoro-1-[(1R,2S)-2-fluorocyclopropyl]-1,4-dihydro-8-methoxy-4-oxo- (CA INDEX NAME)

Absolute stereochemistry.



L18 ANSWER 10 OF 10 CA COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 125:247632 CA
ORIGINAL REFERENCE NO.: 125:46285a,46288a
TITLE: Preparation and formulation of heterocyclic compounds as medical bactericides
INVENTOR(S): Takemura, Makoto; Kimura, Youichi; Kawakami, Katsuhiro; Kimura, Kenichi; Ohki, Hitoshi; Matsuhashi, Norikazu; Kawato, Haruko
PATENT ASSIGNEE(S): Daiichi Pharmaceutical Co., Ltd., Japan
SOURCE: PCT Int. Appl., 124 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 9623782 | A1 | 19960808 | WO 1996-JP208 | 19960201 |
| W: CA, CN, FI, KR, NO, US | | | | |
| RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| CA 2212007 | A1 | 19960808 | CA 1996-2212007 | 19960201 |
| CA 2212007 | C | 20040914 | | |
| JP 08277284 | A | 19961022 | JP 1996-16260 | 19960201 |
| JP 3745433 | B2 | 20060215 | | |
| EP 807630 | A1 | 19971119 | EP 1996-901518 | 19960201 |
| EP 807630 | B1 | 20030507 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE | | | | |
| TW 487701 | B | 20020521 | TW 1996-85101378 | 19960201 |
| EP 1304329 | A2 | 20030423 | EP 2003-883 | 19960201 |
| EP 1304329 | A3 | 20040915 | | |
| EP 1304329 | B1 | 20081015 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE | | | | |
| AT 239720 | T | 20030515 | AT 1996-901518 | 19960201 |
| PT 807630 | T | 20030829 | PT 1996-901518 | 19960201 |
| ES 2198474 | T3 | 20040201 | ES 1996-901518 | 19960201 |
| AT 411309 | T | 20081015 | AT 2003-883 | 19960201 |
| NO 9703530 | A | 19971002 | NO 1997-3530 | 19970731 |
| NO 314546 | B1 | 20030407 | | |
| FI 9703207 | A | 19971001 | FI 1997-3207 | 19970801 |
| US 5849757 | A | 19981215 | US 1997-875678 | 19970804 |

PRIORITY APPLN. INFO.:

| | | |
|---|---|---|
| JP 1995-15614 | A | 19950202 |
| JP 1995-19478 | A | 19950207 |
| JP 1995-19481 | A | 19950207 |
| EP 1996-901518 | A3 | 19960201 |
| WO 1996-JP208 | W | 19960201 |

OTHER SOURCE(S): MARPAT 125:247632

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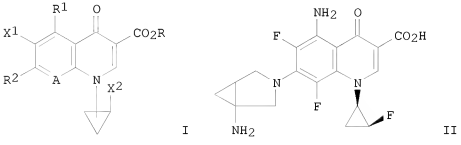


I II

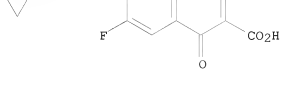
AB The title compds. I [X1 represents halo or hydrogen; X2 represents halo; R1 represents hydrogen, hydroxy, thiol, halomethyl, amino, alkyl or alkoxy; R2 represents a pyrrolidine moiety (generic structure given); A represents nitrogen, etc.; and R represents hydrogen, Ph, acetoxymethyl, pivaloyloxymethyl, ethoxycarbonyl, choline, dimethylaminoethyl, 5-indanyl, etc.] are prepared The title compound II (preparation given) in vitro showed MIC values of ≤ 0.003 μg/mL and 0.05 μg/mL against E. coli NIHJ and P. aeruginosa 32104, resp.

IT 181941-18-4P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of heterocyclic compds. as medical bactericides)

RN 181941-18-4 CA

CN 3-Quinolinecarboxylic acid, 7-[3-(1-aminocyclopropyl)-1-pyrrolidinyl]-6-fluoro-1-(2-fluorocyclopropyl)-1,4-dihydro-8-methoxy-4-oxo-, [1R-[1α(R*),2α]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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L2             0 S L1 SAM
L3             0 S L1 FULL

     FILE 'CASREACT, CHEMINFORMRX, DJSMONLINE, PS' ENTERED AT 10:20:21 ON 22
     JAN 2009
L4             0 S L1
L5               STRUCTURE UPLOADED
L6             0 S L5

     FILE 'REGISTRY' ENTERED AT 10:24:33 ON 22 JAN 2009
L7               STRUCTURE UPLOADED
L8               STRUCTURE UPLOADED
L9             5 S L7 FULL
L10           19 S L8 FULL

     FILE 'CA' ENTERED AT 10:25:29 ON 22 JAN 2009
L11            1 S L9 FULL
L12           40 S L10 FULL
L13            1 S L11 AND L12

     FILE 'REGISTRY' ENTERED AT 10:26:08 ON 22 JAN 2009
L14              STRUCTURE UPLOADED
L15          148 S L14 FULL

     FILE 'CA' ENTERED AT 10:27:47 ON 22 JAN 2009
L16           88 S L15
L17            1 S L16 AND L12
L18           10 S L10/PREP

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---Logging off of STN---


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Executing the logoff script...


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STN INTERNATIONAL LOGOFF AT 10:28:44 ON 22 JAN 2009
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